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GIFFORD, KRASS, SPRINKLE, ANDERSON & CITKOWSKI, P.C			EXAMINER	
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			2612	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/749,494

Applicant(s)

AL-SHEIKH, ZAHER

Examiner

Travis R. Hunnings

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 11, 14-28 and 32-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11, 14-28 and 32-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-6, 8, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy et al. (McCarthy; US Patent 6,768,420) in view of Chuang (US Patent 5,054,686).

Regarding claim 1, McCarthy discloses *Vehicle Compartment Occupancy Detection System* that has the following claimed limitations:

The claimed mammalian body motion detector sensing a confined space is met by the electric field sensor for detecting if a person is located inside the vehicle (column 2, lines 14-18). The field sensor detects the presence of a person based on the movement made by that person breathing (column 4, lines 60-67 and column 5, lines 1-10);

The claimed thermocouple measuring a temperature within the confined space relative to a thermal threshold is met by the temperature being measured by a thermocouple having a threshold of dangerous temperature (column 2, lines 33-58 and column 7, lines 21-28);

The claimed video camera having a fisheye or other wide angle lens is met by the additional sensors including a video camera (column 8, lines 61-67). Any lens would

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have been chosen for the particular task of capturing an image inside the vehicle, including a fisheye or wide angle lens;

The claimed controller receiving an output from said thermocouple corresponding to the temperature and a signal from said motion detector corresponding to an occupant within the confined space is met by the vehicle body computer that the sensor inputs are fed into so that it can determine when the temperature is at a dangerous level and there is someone inside the vehicle (column 7, lines 17-52);

The claimed alarm subsystem triggered by said controller communicating to a remote location that the temperature in the space is beyond the thermal threshold and an occupant is within the space subsequent to a condition precedent along with a video image generated by said video camera is met by the device communicating to a remote receiver when a person is detected in the space and the temperature is above the threshold thereby indicating a dangerous situation and sending an image of the vehicle interior to an OnStar operator or the like (abstract, column 2, lines 5-10 and 33-58 and column 7, lines 30-52).

McCarthy does not explicitly disclose the claimed reserve power unit enabling said controller to function upon loss of routing power however examiner takes official notice that it is well known in the art for an electrical device to have a backup or reserve power system to take over powering the device when the main power system fails.

McCarthy does not explicitly disclose the claimed motion detector being an infrared sensor sensing a confined space. Chuang discloses *Automobile Environment Management System* that teaches using an infrared detector to detect the presence of a

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living being in an automobile (column 2, lines 39-48). Using an infrared detector would provide the user with an alternative way to detect the presence of a living being in the vehicle which would make the device more robust way of presence detection. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by McCarthy according to the teachings of Chuang to use an infrared sensor for the motion detection.

Regarding claim 2, the claimed confined space being selected from the group consisting of a building structure, a vehicle passenger compartment and a vehicle trunk is met by the space being detected being a vehicle compartment or trunk (column 1, lines 64-67).

Regarding claims 3 and 4, the claimed alarm subsystem being a wireless transmitter is met by the device communicating through a cellular phone that inherently has a wireless transmitter (column 7, lines 30-52).

Regarding claim 5, the claimed alarm subsystem comprising an auditory alarm indicating that the temperature in the space exceeds a thermal threshold and the occupant is within the space is met by the device beeping the vehicle's horn when it detects a dangerous condition indicating a high temperature and a person occupying the space (column 7, lines 30-52).

Regarding claim 6, the claimed condition precedent is the temperature within a vehicle confined space being above the threshold for a predetermined amount of time with the occupant therein is met by the system monitoring the temperature and indicating a dangerous condition if the temperature has been above the threshold level for a certain time period (column 8, lines 27-60).

Regarding claim 8, the claimed alarm subsystem having a burglar detection mode that communicates an emergency signal to a remote location upon detecting the occupant within the space and independent of the temperature being beyond the thermal threshold, the emergency signal comprising a video image collected by said video camera is met by the intrusion sensor being used to detect break-in attempts (column 9, lines 41-59) and also one of ordinary skill in the art would have realized that the disclosed function of sending an image of the interior of the vehicle to an OnStar operator or the like (column 7, lines 30-52) would be applicable not only to dangerous temperature conditions but to break-in conditions as well.

Regarding claim 11, it would have been obvious to start the video camera when the temperature exceeds the threshold and an occupant is detected in order to capture the images to be sent to the remote location (column 7, lines 30-52).

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy in view of Chuang and further in view of Ford (US Patent 6,756,896).

Regarding claim 7, McCarthy and Chuang disclose all of the claimed limitations except for the claimed condition precedent is failure by the occupant to reset the auditory alarm within a pre-selected amount of time. Ford discloses *Distributed Residential Alarm System And Method Therefor* that teaches originating a localized alarm at a location in response to an emergency condition being detected and then if after a certain pre-determined period of time the localized alarm is not reset, the system alerts other remote units that there is an alarm condition at the localized location (abstract, figure 4). Modifying the alert system of McCarthy and Chuang to provide a localized warning, such as beeping the car horn, and if the alarm has not been stopped within a pre-determined period of time then alerting the remote user would help to eliminate some false alarms and save the battery of the remote receiver. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by McCarthy and Chuang in view of Ford to have the condition precedent be failure to reset the auditory alarm within a pre-selected period of time.

4. Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy in view of Chuang and further in view of Wilkinson (US Patent 5,892,447).

Regarding claim 14, McCarthy discloses the remote receiver being a user's cellular telephone (column 7, lines 30-52) however McCarthy does not specifically disclose the receiver comprising:

A housing;

A wireless antennae for receiving an emergency signal from said alarm subsystem;

A display for providing the emergency signal in human recognizable form;

A digital memory for storing images;

A data transmission portal; and

A receiver battery power supply.

Wilkinson discloses *Portable Cellular Alert System* that teaches a cellular phone with a housing as seen in figure 10; a wireless antennae for receiving both emergency signals and cellular communication signals as seen by element 405 in figure 2 (column 2, lines 11-31); a display for providing the user with a display of the date and time the signal was received (column 2, lines 65-67); a memory for storing digital data as seen by element 407 in figure 2 and it would have been obvious to one of ordinary skill in the art to store anything in the memory including images; a cellular telephone to transmit to a remote location as seen by element 415 in figure 2; and a battery to provide power to the electronics of the unit (column 2, lines 55-57). Modifying the cellular receiver of McCarthy and Chuang to have the specific details as taught by Wilkinson would provide the user with a device that has all of the needed components to allow the receiver to work within the system. Therefore it would have been obvious to one of ordinary skill in

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the art at the time of the invention to modify the device disclosed by McCarthy according to the teachings of Wilkinson to have a receiver with the above specifications.

Regarding claim 16, it would have been obvious that the housing of the cellular phone contains a bar code because every cellular phone is provided with a manufacturer's bar code upon assembly in order to facilitate tracking and identification of the cellular phones.

5. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy in view of Chuang and further in view of Brinkmeyer et al. (Brinkmeyer; US Patent 5,940,007).

Regarding claim 14, McCarthy and Chuang disclose a key FOB that receives indication from the device that a dangerous condition exists at the vehicle, however McCarthy does not specifically disclose the specific makeup of the key FOB as claimed in claim 14. Brinkmeyer discloses *Remote Control System For Motor Vehicle Related Devices* that teaches the specific makeup of the key FOB having a housing as seen in figure 2, a wireless antennae for receiving an emergency signal from a vehicle as seen in figure 1 (column 5, lines 17-40), a display for providing user readable information as seen in figure 2, it would be obvious for the device to include memory to store vehicle information and icon images associated with the display, a data transmission device for transmitting information to the vehicle (column 5, lines 17-40) and it would have been

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obvious to include a battery to provide power to all electronic components of the key FOB. Modifying the key FOB of McCarthy and Chuang according to Brinkmeyer would give the user an existing device that is known to work and be able to communicate with a vehicle system for sending and receiving information regarding the vehicle. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by McCarthy and Chuang according to the teachings of Brinkmeyer to have a key FOB according to the above specifications.

Regarding claim 15, McCarthy, Chuang and Brinkmeyer disclose all of the claimed limitations. The claimed receiver housing having an aperture engaging a key ring is met by the key FOB as shown in figure 2 and it is well known that key FOBs are built to engage key rings.

6. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy in view of Chuang and further in view of Barnas et al. (Barnas; US Patent 6,642,838).

Regarding claims 17, McCarthy and Chuang disclose all of the claimed limitations except for the claimed system further comprising geographic location information communicated to the remote location by said alarm subsystem. Barnas discloses *Safety System For Automobiles* that teaches using a GPS (Global Positioning System) to send location information of the vehicle to a remote location when a

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dangerous condition is detected at the vehicle (abstract and column 4, lines 37-49).

Providing location information in the form of GPS information to a remote receiver would allow the user to quickly find the vehicle when a dangerous condition is detected.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by McCarthy and Chuang according to the teachings of Barnas to transmit location information in the form of GPS information to a remote location when a dangerous condition is detected.

7. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy in view of Chuang and further in view of Wilkinson and further in view of Barnas.

Regarding claim 18, the claim is interpreted and rejected as McCarthy, Chuang and Wilkinson in view of Barnas using the same reasoning as laid out in claim 17 stated above.

8. Claims 19-25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy in view of Chuang and further in view of Monroe et al. (Monroe; US Patent 4,882,564).

Regarding claim 19, McCarthy discloses the following claimed limitations:

The claimed mammalian body motion detector sensing a confined space is met by the electric field sensor for detecting if a person is located inside the vehicle (column 2, lines 14-18). The field sensor detects the presence of a person based on the movement made by that person breathing (column 4, lines 60-67 and column 5, lines 1-10);

The claimed thermocouple measuring a temperature within the vehicle relative to a thermal threshold is met by the temperature being measured by a thermocouple having a threshold of dangerous temperature (column 2, lines 33-58 and column 7, lines 21-28);

The claimed video camera having a fisheye or other wide angle lens is met by the additional sensors including a video camera (column 8, lines 61-67). Any lens would have been chosen for the particular task of capturing an image inside the vehicle, including a fisheye or wide angle lens;

The claimed controller receiving an output from said thermocouple corresponding to the temperature and a signal from said motion detector corresponding to an occupant within the confined space is met by the vehicle body computer that the sensor inputs are fed into so that it can determine when the temperature is at a dangerous level and there is someone inside the vehicle (column 7, lines 17-52);

The claimed switch automatically opening a vehicle portal in response to the temperature within the vehicle compartment exceeding the thermal threshold and said detector sensing an occupant within the vehicle compartment is met by the device

opening/rolling down the windows of the vehicle when a dangerous condition is detected (column 7, lines 30-52);

The claimed alarm subsystem triggered by said controller to automatically communicate to a remote location that the temperature in the vehicle compartment is beyond the thermal threshold and the occupant is within the vehicle compartment is met by the device communicating to a remote receiver when a person is detected in the space and the temperature is above the threshold thereby indicating a dangerous situation (abstract, column 2, lines 5-10 and 33-58 and column 7, lines 30-52).

McCarthy does not explicitly disclose the claimed reserve power unit enabling said controller to function upon loss of routing power however examiner takes official notice that it is well known in the art for any kind of electrical device to have a backup or reserve power system to take over powering the device when the main power system fails.

McCarthy does not explicitly disclose the claimed motion detector being an infrared sensor sensing a confined space. Chuang discloses *Automobile Environment Management System* that teaches using an infrared detector to detect the presence of a living being in an automobile (column 2, lines 39-48). Using an infrared detector would provide the user with an alternative way to detect the presence of a living being in the vehicle which would make the device more robust way of presence detection. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by McCarthy according to the teachings of Chuang to use an infrared sensor for the motion detection.

McCarthy and Chuang do not explicitly disclose the claimed alarm subsystem automatically communicating to a remote location the temperature measured by the thermocouple. Monroe discloses *Remote Temperature Monitoring System* that teaches a remote temperature monitoring device that receives and displays the monitored temperature (abstract). Modifying McCarthy and Chuang to not only alert the user that the temperature is above a threshold, but to also give them the exact monitored temperature would allow the user to better ascertain the level of danger, i.e. whether the temperature is only slightly above the threshold or greatly above the threshold. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by McCarthy and Chuang in view of the teachings of Monroe to transmit and display the monitored temperature to the user.

Regarding claim 20, the claimed alarm subsystem comprising a wireless transmitter is met by McCarthy using a cellular phone to transmit and receive information regarding the vehicle status (column 7, lines 30-52).

Regarding claim 21, it would have been obvious to activate both the vehicle horn and open/roll down the windows of the vehicle when a dangerous condition is detected to both alert people nearby that there is a problem and to provide some fresh air and temperature relief to those inside the vehicle (column 7, lines 30-52).

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Regarding claim 22, the claimed system further comprising a video camera is met by McCarthy having a video camera (column 8, lines 61-67).

Regarding claim 23, the claim is interpreted and rejected as claim 11 stated above.

Regarding claim 24, the claimed system further comprising a video camera activated to collect an image as part of the emergency signal is met by the video camera (column 8, lines 61-67) and sending an image of the compartment to an operator (column 7, lines 30-52).

Regarding claim 25, the claimed system wherein the vehicle portal is selected from the group consisting of a window, sunroof, and trunk is met by the device of McCarthy opening/rolling down the windows of the vehicle (column 7, lines 30-52).

Regarding claim 28, the claimed cellular communication transmitter transmits a signal suitable for triangulation to locate the vehicle compartment is met by the device transmitting a cellular signal that is inherently able to be triangulated (column 7, lines 30-52).

9. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy in view of Chuang and further in view of Monroe and further in view of Barnas.

Regarding claims 26 and 27, the claims are interpreted and rejected as claim 17 stated above.

10. Claims 32, 33, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy in view of Chuang and further in view of Monroe and further in view of Ford.

Regarding claim 32, McCarthy discloses the following claimed limitations:

The claimed process of disposing a mammalian body motion detector in the space is met by the electric field sensor being placed in a vehicle compartment for detecting the occupancy of the space (column 2, lines 14-18). This sensor would also obviously detect motion because there would have to be a presence whenever there is motion therefore every time there is motion, there is a presence that is being detected;

The claimed process of sensing a temperature within the space is met by the thermocouple sensing the temperature within the vehicle (column 2, lines 33-58 and column 7, lines 17-21);

The claimed process of comparing the temperature with a pre-selected threshold temperature is met by the temperature being compared to a threshold (column 7, lines 21-28);

McCarthy does not explicitly disclose the claimed motion detector being an infrared sensor sensing a confined space. Chuang discloses *Automobile Environment Management System* that teaches using an infrared detector to detect the presence of a living being in an automobile (column 2, lines 39-48). Using an infrared detector would provide the user with an alternative way to detect the presence of a living being in the vehicle which would make the device more robust way of presence detection. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by McCarthy according to the teachings of Chuang to use an infrared sensor for the motion detection.

However, McCarthy and Chuang do not specifically disclose the claimed process of activating a wireless transmitter alarm subsystem in response to a condition precedent of a failure to reset an auditory alarm within a pre-selected amount of time Ford teaches originating a localized alarm at a location in response to an emergency condition being detected and then if after a certain pre-determined period of time the localized alarm is not reset, the system alerts other remote units that there is an alarm condition at the localized location (abstract, figure 4). Modifying the alert system of McCarthy and Chuang to provide a localized warning, such as beeping the car horn, and if the alarm has not been stopped within a pre-determined period of time then alerting the remote user would help to eliminate some false alarms and save the battery

of the remote receiver. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by McCarthy and Chuang in view of Ford to have the condition precedent be failure to reset the auditory alarm within a pre-selected period of time.

McCarthy, Chuang and Ford do not explicitly disclose the claimed communicating to a remote location the temperature within the space. Monroe teaches a remote temperature monitoring device that receives and displays the monitored temperature (abstract). Modifying McCarthy, Chuang and Ford to not only alert the user that the temperature is above a threshold, but to also give them the exact monitored temperature would allow the user to better ascertain the level of danger, i.e. whether the temperature is only slightly above the threshold or greatly above the threshold. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by McCarthy, Chuang and Ford in view of the teachings of Monroe to transmit and display the monitored temperature to the user.

Regarding claim 33, the claimed process further comprising the step of opening a portal in the space when the occupant is detected within the space and the temperature therein is beyond the threshold for the pre-selected amount of time is met by the device opening/rolling down the windows of the vehicle when a dangerous condition has existed for a specific amount of time (column 7, lines 30-52 and column 8, lines 27-60).

Regarding claim 35, the claim is interpreted and rejected as claim 28 stated above.

Regarding claim 36, the claimed process further comprising the step of disposing a video camera in the space and transmitting a video image by way of said wireless transmitter is met by the video camera taking pictures that are sent wirelessly to a remote location (column 8, lines 61-67 and column 7, lines 30-52).

11. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy in view of Chuang and further in view of Monroe further in view of Ford and further in view of Barnas.

Regarding claim 34, the claim is interpreted and rejected as claim 17 stated above.

Response to Arguments

12. Applicant's arguments filed 16 March 2007 have been fully considered but they are not persuasive. Applicant argues the following:

Argument A: The McCarthy reference teaches away from using Infrared sensors for detecting the presence of a body in the interior of a vehicle.

Argument B: The McCarthy reference is both explicit and exhaustive as to the types of image capture devices that are usable and does not include a fisheye or wide angle lens for its image sensor.

Responses:

Regarding argument A, while McCarthy does not specifically disclose using an infrared sensor, and discusses prior art systems that do use infrared sensors along with the deficiencies of those systems, McCarthy does not teach that infrared sensors can not be used to detect the presence of bodies and the Chuang reference clearly teaches the use of infrared sensors to detect bodies in a vehicle and it would have been obvious to one of ordinary skill in the art to modify McCarthy in view of Chuang.

Regarding argument B, contrary to applicant's allegation, McCarthy is not exhaustive, nor preventing one skilled in the art to employ a fisheye or wide angle lens for its image sensor.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis R. Hunnings whose telephone number is (571) 272-3118. The examiner can normally be reached on 8:00 am - 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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TRH


BENJAMIN C. LEE
PRIMARY EXAMINER